(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 31 March 2005 (31.03.2005)

(10) International Publication Number WO 2005/027836 A3

(51) International Patent Classification': C07K 16/00, A61K 39/21, 39/38, 39/385

(21) International Application Number:

PCT/US2004/030035

(22) International Filing Date:

14 September 2004 (14.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

10/664,029 17 September 2003 (17.09.2003) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

US 10/664,029 (CIP) Filed on 17 September 2003 (17.09.2003)

- (71) Applicant (for all designated States except US): DUKE UNIVERSITY [US/US]; Box 90083, Durham, NC 27708-0083 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HAYNES, Barton, F. [US/US]; 3923 Wentworth Street, Durham, NC 27707 (US). PATEL, Dhavalkumar, D. [US/US]; 3012 Deerchase Wynd, Durham, NC 27712 (US). ALAM, Munir [US/US]; 203U Barkdale Drive, Chapel Hill, NC 27516 (US). LIAO, Hua-Xin [CN/US]; 200 Pebble Spring Road, Chapel Hill, NC 27514 (US).

- (74) Agent: WILSON, Mary, J.; Nixon & Vanderhye P.C., 901 North Glebe Road, Arlington, VA 22203 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

(88) Date of publication of the international search report: 12 January 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMMUNOGEN

(57) Abstract: The present invention relates, in general, to an immunogen and, in particular, to an immunogen for inducing antibodies that neutralize a wide spectrum of HIV primary isolates. The invention also relates to a method of inducing anti-HIV antibodies using same.

INTERNATIONAL SEARCH REPORT

PCT/US04/30035

| A CLASSIFICATION OF SUBJECT MATTER | | | | |
|--|--|--|--|--|
| IPC(7) : C07K 16/00; A61K 39/21, 39/38, 39/385 US CL : 530/324, 325, 326, 327, 388.35, 389.4, 391.1; 424/185.1, 188.1, 193.1, 194.1, 208.1 | | | | |
| According to International Patent Classification (IPC) or to both national classification and IPC | | | | |
| B. FIELDS SEARCHED | | | | |
| Minimum documentation searched (classification system followed by classification symbols) U.S.: 530/324, 325, 326, 327, 388.35, 389.4, 391.1; 424/185.1, 188.1, 193.1, 194.1, 208.1 | | | | |
| Documentation remethed other than minimum documentation to the extent that such documents are included in the fields!searched | | | | |
| Electronic dans base consulted during the international search (name of data base and, where practicable, search terms uged) WEST, Medline | | | | |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT | | | | |
| Category * | Citation of document, with indication, where a | propriate, of the relevant passages | Relevant vo claim No. | |
| X | US 2002/0086283 A1 | | | |
| | | | | |
| Further documents are listed in the continuation of Box C See patent family annex. | | | | |
| ** Special categories of third documents: "A" document defining the general state of the art which is not considered to be of particular relevance "It document which may throw doubts on priority claim(s) or which is niced to establish the publication date of enother estation or other special reason (as a prophical the publication date of enother estation or other special reason (as "O" document which as our date of enother estation or other means | | date and not in conflict with the application of particular relevances, the considered novel or example consider | Inter decement published after the international filingulate or printity data and not in conflict with the application but sized to and extend the principle or theory underlying the invention decement of particular relevance; the alabated invention against be considered novel or example about the deciment is taken about a line when the deciment is taken about a line of invention council be considered to involve an inventive step when the deciment is combined with one or since other such decements, such combination being obvious to a person skilled in the art | |
| | | dominant of particular relevance; the section of particular relevance; the section of particular relevance; the section of the | | |
| | | document member of the same putent family | | |
| Date of the actual completion of the international search | | Date of mailing of the international search report | | |
| 18 September 2005 (18,09,2005) Name and mailing address of the ISA/US | | Authorized officer Marke A | Walter | |
| Mail Stop PCT, Attn: ISA/US Commissioner for Patents | | Jeffrey Stucker | | |
| P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 872-9306 | | Telephone No. (703) £72-1600 | | |